Zoe Krauss

Ph.D. Candidate, University of Washington

(847) 873 4056
zkrauss@uw.edu

EDUCATION	**Ph.D.** University of Washington, School of Oceanography *Anticipated 2025*
	Marine Geology & Geophysics; Advisor: William S.D. Wilcock
	M.S. University of Washington, School of Oceanography 2021
	B. A. Colorado College 2019
	Physics major: Geophysics emphasis; Magna cum laude; Phi Beta Kappa

PUBLICATIONS

Krauss, Z., Ni, Y., Henderson, S., & Denolle, M. (2023). Seismology in the cloud: guidance for the individual researcher. *Seismica*, *2*(2). https://doi.org/10.26443/seismica.v2i2.979

Krauss, Z., Wilcock, W. S., Heesemann, M., Schlesinger, A., Kukovica, J., & Farrugia, J. J. (2023). A Long-Term Earthquake Catalog for the Endeavour Segment: Constraints on the Extensional Cycle and Evidence for Hydrothermal Venting Supported by Propagating Rifts. *Journal of Geophysical Research: Solid Earth*, *128*(2), e2022JB025662.

Krauss, Z., & Menke, W. (2020). The Northern Gulf Anomaly: P-and S-wave travel time delays illuminate a strong thermal feature beneath the Northern Gulf of Mexico. *Earth and Planetary Science Letters*, *534*, 116102.

Almendros, J., **et al.** (2020). BRAVOSEIS: Geophysical investigation of rifting and volcanism in the Bransfield strait, Antarctica. *Journal of South American Earth Sciences* 104: 102834.

Borella, J., Quigley, M., **Krauss, Z.,** Lincoln, K., Attanayake, J., Stamp, L., Lanman, H., Levine, S., Hampton, S. & Gravley, D. (2019). Geologic and geomorphic controls on rockfall hazard: how well do past rockfalls predict future distributions?. *Natural Hazards and Earth System Sciences*, *19*(10), 2249-2280.

WHITE PAPERS

Krauss, Z., Eilon, Z., Parnell-Turner, R., Janiszewski, H., Worthington, L., Kidiwela, M., & Brunsvik., B. (2021) Call to expand ocean bottom seismograph (OBS) facilities and instrument pool for ambitious Rift2Ridge science. *2021 Rift2Ridge Workshop.*

SEMINAR TALKS

Long-term seismic data unlocks the story of a mid-ocean ridge. Ocean Networks Canada Lunch and Learn, general audience. (Invited, 2023)

Long-term and real-time seismic monitoring of a mid-ocean ridge. Pacific Geoscience Center-University of Victoria Seminar. (Invited, 2023)

Machine-learning-based detection of offshore earthquakes. Data Science Seminar, University of Washington. Recording available on YouTube. (2022)

Building and interpreting an earthquake catalog for the Endeavour segment. Seismolunch Seminar and the Marine Geology and Geophysics Seminar, University of Washington, virtual. (2021)

Deep structure of the Northern Gulf of Mexico from Seismic Data. USGS Menlo Park and Stanford Reading Group, virtual. (Invited, 2021)

CONFERENCE PRESENTATIONS	SSA Annual Meeting, San Juan, PR (poster)	2023
	Constructing Cloud Resources for the Individual Researcher From the Ground Up: An Example of Earthquake Detection in the Cloud	
	AGU Fall Meeting, Chicago, IL (poster)	2022
	Investigating microearthquake multiplets using ocean bottom seismometers in a mid-ocean ridge hydrothermal field	

	NDSEG Fellows Conference, Boston, MA (poster and talk)	2022

Using real-time offshore seismic observations to understand the seafloor spreading cycle

SSA Annual Meeting, Bellevue, WA (poster)   2022

Long-term Earthquake Catalog for the Endeavour Segment of the Juan De Fuca Ridge Highlights the Influence of Propagating Rifts on Hydrothermal Venting

AGU Fall Meeting, virtual (talk)   2021

Long-term earthquake patterns at the Endeavour Segment, Juan de Fuca Ridge

Rift2Ridge Workshop, virtual (lightning talk)   2021

Lessons from multiple decades of observations on the Endeavour Segment

Marine Seismology Symposium, virtual (live short talk)   2021

Building a Multidecadal Microearthquake Catalog for the Endeavour Segment of the Juan de Fuca Ridge

AWARDS

NDSEG Conference Exemplary Poster Award	2022
AGU Outstanding Student Presentation Award (OSPA)	2021
National Defense Science and Engineering Fellowship (NDSEG)	2020
NSF GRFP Fellowship	2020

Declined in favor of the NDSEG

ARCS Fellowship, University of Washington	2019
NSF GRFP Honorable Mention	2019
Association of Women Geoscientists Outstanding Student Award	2019
David and Karen Smith Cowperthwaite Award for Excellence in Physics	2019

Awarded by the Colorado College Physics Department

COMPUTATIONAL EXPERIENCE

Proficient in Python and Matlab
Experience with cloud computing (Azure), Git, Linux systems

& SUPPORT

University of Washington Azure Cloud Support   2023
$5,000 of Azure cloud computing credits to use toward the documentation of time and cost scaling of seismic workflows.

University of Washington eScience Cloud ReproHack Week   2022
Chosen to work alongside Microsoft Azure cloud computing experts to migrate local workflows onto the cloud.

University of Washington Azure Cloud Support   2022
$20,000 of Azure cloud computing credits to use towards the creation of earthquake catalogs using machine learning.

University of Washington eScience Incubator Program   2022
Accepted to work one-on-one with a professional data scientist for 10 weeks to create a machine-learning-based earthquake catalog curation workflow using cloud computing resources.

ADDITIONAL ATTENDED MEETINGS

USGS Cascadia Subduction Zone Science Meeting, Seattle, WA	2023
SZ4D Community Meeting, Houston, TX	2022
USGS Cascadia Subduction Zone Science Meeting, Seattle, WA	2020

TEACHING AND MENTORSHIP	**Data Science in Oceanography Summer Program** Mentor, University of Washington	2022

TEACHING AND MENTORSHIP

Data Science in Oceanography Summer Program — 2022
Mentor, University of Washington
- Prepared and led Python tutorials on introductory seismic analysis
- Gave introductory lecture to Marine Geology and Geophysics
- Served as mentor for an undergraduate project

OCEAN 201: Intro to Oceanography Lab — 2021
Teaching assistant, University of Washington, virtual due to COVID
- Prepared lab experiments and reports
- Graded ~40 lab reports / week
- Co-led synchronous lab sessions

FIELD EXPERIENCE

OBS deployment at Axial Seamount, R/V Langseth* — 2022
  *Missed due to COVID emergency
DAS deployment on OOI cabled network, Pacific City, OR — 2021
OBS Retrieval at Bransfield Strait, Antarctica, R/V Hesperides — 2020
Frontiers Abroad geology field camp, New Zealand — 2017